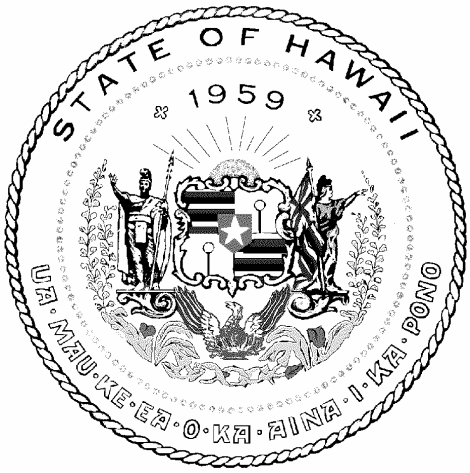

Report of the
Physician On-Call Crisis Task Force

In Accordance with Senate Concurrent Resolution No. 150 (2006)

Prepared by the

INSURANCE DIVISION
DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS
STATE OF HAWAI`I

December 2006

Foreword

Senate Concurrent Resolution No. 150 (S.C.R. 150) adopted during the Regular Session of 2006 requested the Insurance Commissioner to convene a task force to study the physician on-call crisis. Specifically, S.C.R. No. 150 (2006) requested the task force to examine provider reimbursement versus cost of care issues as they relate to the physician on-call crisis. Pursuant to S.C.R. No. 150 (2006), I appointed seventeen persons to serve on the Physician On-Call Crisis Task Force. Following discussions and research, the task force produced this Report, which I respectfully submit to the 2007 Legislature.

J.P. SCHMIDT
Insurance Commissioner

TASK FORCE MEMBERSHIP

The Physician On-Call Crisis Task Force comprises seventeen members appointed by Insurance Commissioner Schmidt pursuant to S.C.R. No. 150 (2006). The members are as follows:

J.P. Schmidt, Esq., Chair of the Task Force
Insurance Commissioner of the State of Hawai`i
Department of Commerce and Consumer Affairs

Paula Arcena
Executive Director
Hawai`i Medical Association

Morgan Barrett, M.D.
Deputy Director, Health Resources
Department of Health of the State of Hawai`i

William Donahue, Esq.
Consultant
Hawai`i Independent Physician's Association

Rick Jackson
Chief Operating Officer
MDX Hawai`i

Lloyd Lim, JD, MBA, CPCU
Health Branch Administrator
Insurance Division
Department of Commerce and Consumer Affairs of the State of Hawai`i

Howard Lee
Chief Operating Officer and Vice President
University Health Alliance

Rix Maurer
Vice President of Finance
The Queen's Medical Center

John McComas
Chief Executive Officer
AlohaCare

Wes Mun
Acting Med-QUEST Administrator
Department of Human Services of the State of Hawai`i

Sheryl Murphy, Esq.
Director of Compliance and Accreditation
Hawai`i Management Alliance Association

Harris Nakamoto
Director, Program Management/General Manager
Summerlin Life and Health Insurance Company

Virginia Pressler, M.D., MBA, FACS
Senior Vice President
Hawai`i Pacific Health

Kelley Roberson
Chief Operating Officer and Chief Financial Officer
Hawai`i Health Systems Corporation

Linda Rosen, M.D., MPH
Chief, Emergency Medical Services & Injury Prevention System Branch
Department of Health of the State of Hawai`i

David Sakamoto, M.D.
Administrator, State Health Planning and Development Agency
Department of Health of the State of Hawai`i

Jim Walsh
Vice President, Provider Services
Hawai`i Medical Service Association

FINDINGS

Pursuant to Senate Concurrent Resolution No. 150 (2006), the Physician On-Call Crisis Task Force ("Task Force") was convened to:

1. Examine provider reimbursement versus cost of care issues as they relate to the physician on-call crisis.
2. Gather relevant information, discuss possible solutions, and develop recommendations.

Reimbursements

In an attempt to examine provider reimbursements the Task Force looked first at the Medicare and Medicaid Emergency Room Fee Schedules. These fee schedules are shown below:

Code	Description	Medicaid Fee* (10/15/06)	Medicare Fee 2006
99281	Problem Focused	$15.42	$16.96
99282	Expanded Problem Focused	$23.95	$28.06
99283	Detailed	$48.05	$63.01
99284	Comprehensive Moderate Complexity	$73.66	$98.30
99285	Comprehensive High Complexity	$115.85	$153.83

Source: State Department of Human Services
*Medicaid fee does not apply to QUEST Plans, which have their own unique fee schedules. QUEST Plans reimbursement is, on average, approximately 10% higher than the Medicaid Fee Schedule above.

Private Health Plan reimbursements for the Current Procedural Terminology (CPT) codes above are higher than Medicare fees by 15% and 25% (depending on the payer and the CPT code). This higher level of reimbursement represents the historical "cost shift" caused by under-reimbursement from Government payers which forces providers of all types to demand higher reimbursement from Private Health Plans. This cost-shift results in higher insurance premiums paid by employers and individuals.

These codes and fees are the total reimbursement by Government and Private payers for a physician to attend a patient in the emergency room, and do not incorporate any reimbursement for a physician to be on-call. There is no additional billable code or service to reimburse the on-call specialist for being on-call and coming into the emergency room and seeing the patient. Some private Payers provide an additional reimbursement ($100) based on the time the service was delivered (i.e., between 10 p.m. and 8 a.m.) but this is not a universal practice.

As a result, hospitals on the Neighbor Islands and O`ahu have found it increasingly necessary to make direct payments to on-call specialists in an attempt to assure

adequate access to care twenty-four hours a day, seven days a week. These payments are in many cases substantial ($1,000 or more per night, depending on the medical specialty). However, even these payments are not sufficient to make taking call attractive to the majority of specialists, particularly on the Neighbor Islands where the lower numbers of specialists lead to a higher frequency of being on-call.

On-Call Specialists

Since the demand for specialty coverage and the number of specialists available differs by island, each island has its own unique on-call circumstances.

As such, the Task Force looked at diagnosis codes to estimate the types of physician specialists that may be taking call. The Task Force received from the Hawai`i Medical Service Association (HMSA) the top ten diagnosis codes for emergency room visits sorted by island (see Appendix Exhibit 2). The Task Force also received from the Hawai`i Health System Corporation (HHSC) the top ten diagnoses related groups (DRGs) for discharges by each of their major facilities on the Neighbor Islands (see Appendix Exhibit 3).

The HMSA and HHSC data may suggest some of the medical specialties needed for adequate call coverage on each island. However, the Task Force finds that further analysis of the number of physicians for each specialty on each island is necessary in order to accurately characterize the on-call specialists issue, and projected costs to address it.

Adequacy of Government Reimbursements

The Center for Medicare and Medicaid (CMS) Services pays physicians and other providers based upon 89 fee schedule areas in the United States. CMS presented information to the Task Force that indicates Hawai`i is the 24$^{th}$ highest fee schedule area in the proposed 2007 geographic adjustment factor, and the statewide physician Medicare payments were the seventh highest of all fifty (50) states in 2003 (behind Alaska, New York, Connecticut, New Jersey, Massachusetts and California). By statute Hawai`i Medicaid reimbursement rates must now be at least sixty percent (60%) of Medicare reimbursement. The Hawai`i Department of Human Services presented information to the Task Force that indicates the State's Medicaid fee schedule exceeds that requirement. For the Emergency Room CPT codes on Page 5, Medicaid reimbursements are 75% to 90% of Medicare fees.

The Medicaid fee schedule has not been adjusted since 2001 and the Annual Medicare Fee Schedule Update effective January 1, 2007 called for a decrease in reimbursements of 5%. Congress recently acted to prevent the Annual Medicare Fee Schedule Update from going into effect, but did not provide any physician reimbursement increase. Therefore, Hawai`i physicians will not see any increases in Medicare reimbursements for 2007.

Furthermore, the Task Force received information from Hawai`i hospitals about the adequacy of reimbursement from Government payers. Approximately 50% of the revenues for Hawai`i hospitals are from Government payers. According to the hospitals the level of Government payer reimbursements creates an average 20% loss. This average loss must be recovered in the form of higher average reimbursements from Private payers (i.e., the cost shift). The cost-shift results in higher insurance premiums paid by employers and individuals.

Cost of Care

The Task Force also received from the Healthcare Association of Hawai`i's Chief Financial Officer Roundtable an estimate of the uncompensated and under compensated trauma care for fiscal year 2005. The total call-related costs were $30.9 million of which $22.9 million was for physicians and $8 million was for facilities. The study methodology is attached to this report.

Liability and Malpractice Insurance

The Task Force also found that there were other related issues, which were not specifically mentioned in SCR No. 150, but were considered to be very important to the physician on-call issue. These include increased exposure to liability and malpractice insurance costs.

On-call physicians see patients they have never seen before, and in an emergency situation. This increases the possibility of both real and perceived liability for the physician.

Increased liability, whether perceived or real, has an impact on the supply of specialty coverage. An insufficient supply of specialty coverage puts increased demand on the available specialists in an area. This results in the specialists taking call on a more frequent basis or not taking call at all.

In an attempt to address supply issues, tort reform has been enacted in some areas of the nation, with the intention of improving access to medical care. A report, *Impact of Malpractice Reforms on the Supply of Physician Services*[1], in the Journal of American Medical Association concluded that tort reform increased overall physician supply and direct tort reform increased most specialties with high malpractice insurance premiums. In 2003, Texas passed health care liability reforms. Three years after those reforms there has been an increase in the number of medical specialists, and medically underserved communities are showing impressive gains in physician supply[2]. The Task Force also heard anecdotal comments that tort reform would be helpful in the recruitment of physicians on all islands.

[1] Impact of Malpractice Reforms on the Supply of Physician Service, Journal of American Medical Association (June 1, 2005-Vol. 293, No. 21).
[2] Texas Medical Association at http://www.texmed.org/Template.aspx?id=5238

The Task Force also received information from several sources related to rising malpractice insurance premiums. The Hawai`i Medical Association provided malpractice insurance premium information for the four specialties listed below. The amount of those premiums and the percent increase from the 2001-2002 period to the 2004-2005 period is shown below along with the percent change:

Specialty	2001-2002 Period	2004-2005 Period	% Increase
General Surgery	$24,528	$37,012	50.9%
Neurosurgery	$44,170	$77,104	74.6%
OB/GYN	$40,662	$62,515	53.7%
Orthopedics	$24,049	$34,881	45.0%

Source: Hawai`i Medical Association-Medical Insurance Exchange of California

The Task Force was unable to determine to what degree taking call affects malpractice insurance premiums for certain specialties. However, The Task Force finds that this issue is relevant to the discussion of the physician on-call crisis and any additional study on this issue should incorporate liability and malpractice insurance costs and its effects on this issue.

Economics of Taking Call

In addition, the Task Force discussed whether Hawai`i's cost of living, the choice in lifestyle, or opportunity costs are important related issues. There is strong anecdotal evidence that such things influence physician willingness to take call and contribute to the physician on-call crisis. Reimbursements for services alone may not be sufficient to compensate the physician for the time spent on-call. If the only incentive is reimbursement for services rendered, which are seen as inadequate by many medical specialties, taking call may not be economically appealing to the physician.

Emergency and trauma cases are often complex and take many hours of the physician's time and may not be commensurate with reimbursement alone. In the past, this was mitigated by the economic benefit that taking call was one of the primary ways to get new patient referrals and build a practice. Today, the economics and business arrangements of medicine have changed and taking call is not seen as the necessary investment in practice building that it once was.

The Task Force finds that this issue is relevant to the discussion of the physician on-call crisis.

Summary

SCR No. 150 identifies "reimbursement" as the principal cause of the on-call crisis. As this report points out, physicians and hospitals usually do not have the ability to bill a Government or Private Payer for on-call services. This leads to the requirement for the facility to compensate the physician for taking call. In addition, inadequate

reimbursements by government payers to providers for the actual services rendered add further financial strain to both the physician and the facility. This results in a cost-shift to private payers who pass on the additional cost to employers and individuals through higher premiums.

However, while reimbursement is an important part of assuring adequate access to medical services, other factors add to or influence access to on-call specialist services:

- Perception by physicians that malpractice risk is increased by treating new patients in emergent settings.
- The increasing cost of malpractice insurance for key on-call specialties.
- Lifestyle preference of an aging physician population, particularly on the Neighbor Islands.
- Existence of unique and important differences in on-call coverage on each of the Neighbor Islands and O`ahu hospitals.
- Disruptive impact of being on-call on the physician's regular office practice.
- Challenges in recruiting and retaining physicians in rural Hawai`i.
- Costs of living and doing business in Hawai`i.

RECOMMENDATIONS

The Task Force found the scope of physician on-call crisis in Hawai`i too broad to evaluate without further professional analysis. Clearly identifying the myriad factors contributing to this problem will better serve the State in reaching solutions regarding the physician on-call issue. As such, the Task Force recommends that the Legislature appropriate funding to engage the professional services of a firm experienced with providing analysis and advice on healthcare issues with specific knowledge of the physician on-call issue. The objective of the firm will be to conduct a quantitative and qualitative study that shall include, but not be limited to:

(1) An evaluation of the current physician on-call situation in the State. The evaluation shall include the following:

- An analysis of the past five years of data from all hospitals in the State to determine the trends and the actual costs of emergency and trauma care to facilities.
- An analysis of the past five years of data from all hospitals in the State to determine the cost drivers for the cost of emergency and trauma care to facilities.
- An analysis of the past five years of data from all hospitals in the State to determine the trends and actual reimbursements by all payers including, commercial health plans, Medicare, and Medicaid, for the cost of emergency and trauma care to facilities.
- An analysis of the past five years of malpractice insurance premiums by specialty and sub-specialty for Hawai`i. The analysis shall include average

annual premiums, annual percent changes, projected changes and a comparison with national averages.

- A survey of the current number of active practice physicians in each specialty and sub-specialty in the State by zip code.
- A comprehensive survey of O`ahu physicians to ascertain the reasons they decide whether or not they take call.
- A comprehensive survey of Neighbor Island physicians to ascertain the reasons they decide whether or not they take call.
- A comprehensive survey of physicians who do not admit patients to hospitals or take call to determine what incentives that would make them reconsider taking call.
- A survey of malpractice insurers who are selling policies in the State and malpractice insurers who are not selling policies in the State to determine if taking call affects premiums.

(2) A national review of the management of physician on-call issues by hospitals, health plans, and governments. Specifically the national review shall include:

- An evaluation and comparison of physician on-call shortfalls in other states or localities for which shortfalls in physician on-call services are classified as crisis level.
- An evaluation and comparison of the degree to which physician on-call shortfalls in Hawai`i and in other states or localities with rural areas affected healthcare access and quality.
- An evaluation of solutions identified by other states, local governments, hospital associations, or healthcare organizations as successful in resolving physician on-call shortfalls. The evaluation of each possible solution shall include
    1. The cost of implementation to state government, local government, hospitals, and insurers.
    2. A measurement of the impact of the solution, based on access to care, morbidity/mortality rates from emergency department visits, and change in the number of transfers due to lack of specialist coverage.

(3) A recommendation of solution(s) that would be the most expeditious for the State to implement and solution(s) that would provide the most benefit for the State.

Additionally the Task Force agreed that the limited supply of certain physician specialists contributes to the physician on-call crisis. One of the pressures contributing to the shortage of physicians available and willing to provide on-call services at hospitals is the high cost of physician malpractice insurance. Therefore, as the Legislature continues to address the physician on-call crisis issue, the Task Force strongly recommends the Legislature also address substantive tort reform legislation to ensure adequate access to specialty care.

Appendix

Exhibit 1	Senate Concurrent Resolution No. 150 (2006)
Exhibit 2	Top 10 Diagnosis Codes for Emergency Room Visits by Island
Exhibit 3	Top 10 Diagnosis Related Groups for Four Hawai`i Health Systems Corporation Acute Facilities
Exhibit 4	Study Methodology for the Cost of Uncompensated and Under Compensated Trauma Care for Fiscal Year 2005

Exhibit 1

THE SENATE
TWENTY-THIRD LEGISLATURE, 2006
STATE OF HAWAII

MAR 15 2006

S.C.R. NO. 150

SENATE CONCURRENT RESOLUTION

REQUESTING THE INSURANCE COMMISSIONER TO CONVENE A TASK FORCE TO STUDY THE PHYSICIAN ON-CALL CRISIS.

WHEREAS, Americans assume that they will have access to lifesaving emergency care when they need it, but the reality is that there is a growing crisis in emergency care; and

WHEREAS, the American College of Emergency Physicians (ACEP) studied the nation's emergency care and recently issued a report entitled, "The National Report Card on the State of Emergency Medicine," which concluded that the national emergency health care system is in serious condition, and many states have serious deficiencies; and

WHEREAS, the ACEP report determined that the causes of the national emergency care crisis include the following:

(1) A record number of patients going to emergency departments;

(2) A reduction in the capacity of the nation's emergency systems;

(3) A significant loss of medical-surgical beds and intensive care unit beds;

(4) Rising amounts of uncompensated care due to the federal mandate to screen and stabilize all patients regardless of their ability to pay;

(5) Reductions in payments from private insurance companies, Medicare, and Medicaid; and

(6) Reductions in state health budgets;

and

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S.C.R. NO. 150

WHEREAS, the ACEP report includes a comparison of all states, and Hawaii ranked 34th in the nation, receiving a rating of "C-"; and

WHEREAS, Hawaii's Legislative Reference Bureau (LRB) recently issued a report entitled, On-Call Crisis in Trauma Care: Government Responses, which included the finding that trauma centers across the nation have for many years been facing a crisis securing physician specialists for emergency call; and

WHEREAS, the LRB report identified the following causes of the on-call physician specialist shortage:

(1) The cost of care has increased, while payments to physicians from health plans, Medicare, and Medicaid have dramatically decreased;

(2) Many physician specialists have reduced or eliminated emergency call in favor of a more predictable lifestyle;

(3) There is a national shortage of physician specialists in many areas critical for trauma coverage; and

(4) Malpractice liability insurance premiums are rising;

and

WHEREAS, the on-call physician crisis must be addressed in order to ensure the integrity of emergency and trauma care in Hawaii; now, therefore,

BE IT RESOLVED by the Senate of the Twenty-third Legislature of the State of Hawaii, Regular Session of 2006, the House of Representatives concurring, that the Insurance Commissioner is requested to convene a task force to examine provider reimbursement versus cost of care issues as they relate to the physician on-call crisis; and

BE IT FURTHER RESOLVED that the task force include representatives of health care organizations that have emergency departments and health care insurance companies; and

2006-2120 SCR SMA.doc

S.C.R. NO. 150

BE IT FURTHER RESOLVED that the task force gather relevant information, discuss possible solutions, and develop recommendations; and

BE IT FURTHER RESOLVED that the Insurance Commissioner submit a report to the Legislature of the activities of the task force, including findings, conclusions, and recommendations, no later than twenty days prior to the convening of the Regular Session of 2007; and

BE IT FURTHER RESOLVED that certified copies of this Concurrent Resolution be transmitted to the Governor, the Insurance Commissioner, the Director of Health, the President of the Healthcare Association of Hawaii, and the Chief Executive Officers of the Hawaii Medical Service Association, Kaiser Permanente, Hawaii Management Alliance Association, University Health Alliance, and Summerlin Life & Health Insurance Company.

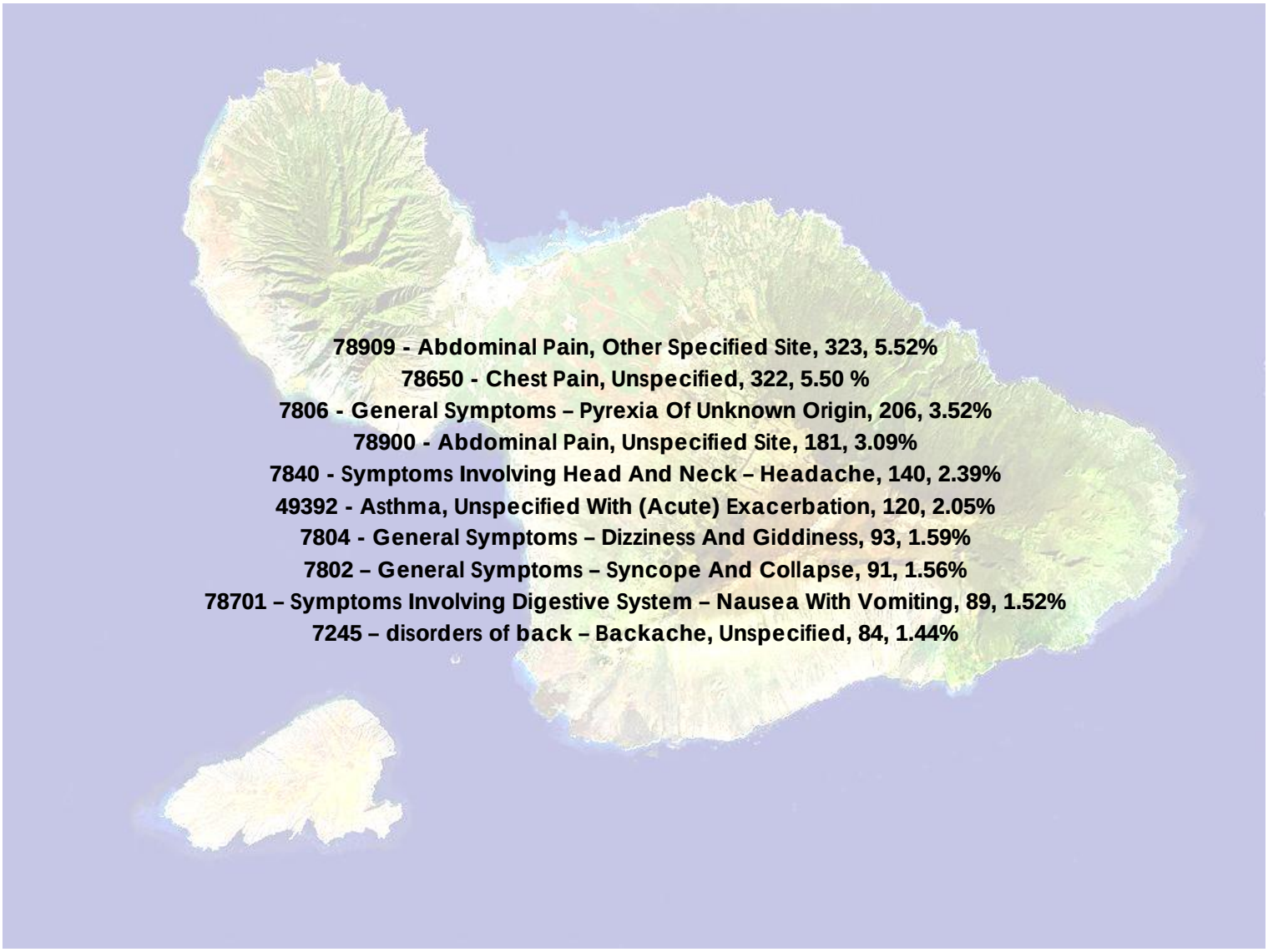
OFFERED BY: Rosalyn H. Baker

Suzanne Chun Oakland

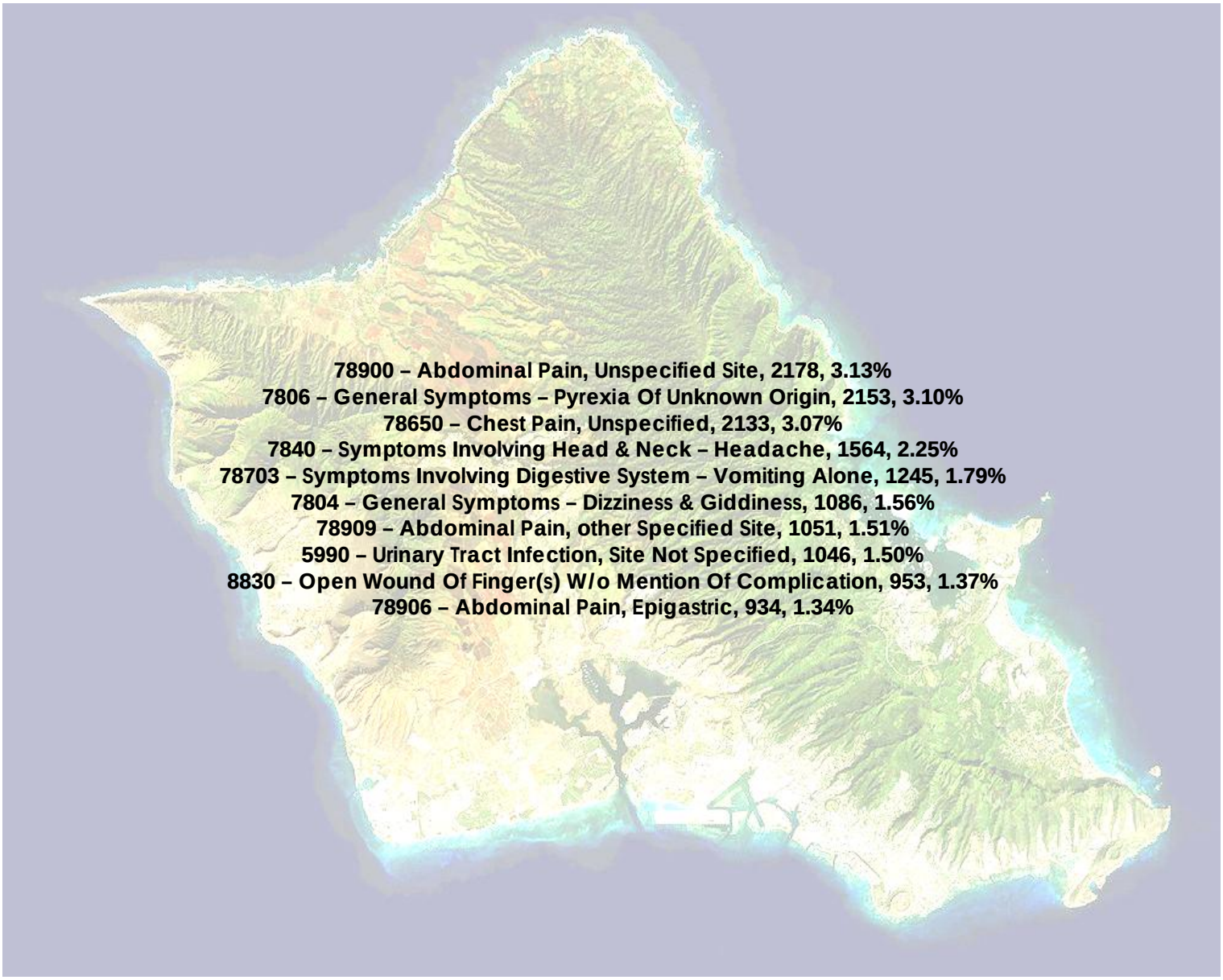
2006-2120 SCR SMA.doc

Exhibit 2

TOP 10 DIAGNOSIS CODES FOR ER VISITS ON THE ISLAND OF MAUI



TOP 10 DIAGNOSIS CODES FOR ER VISITS ON THE ISLAND OF OAHU



TOP 10 DIAGNOSIS CODES FOR ER VISITS ON THE ISLAND OF KAUAI

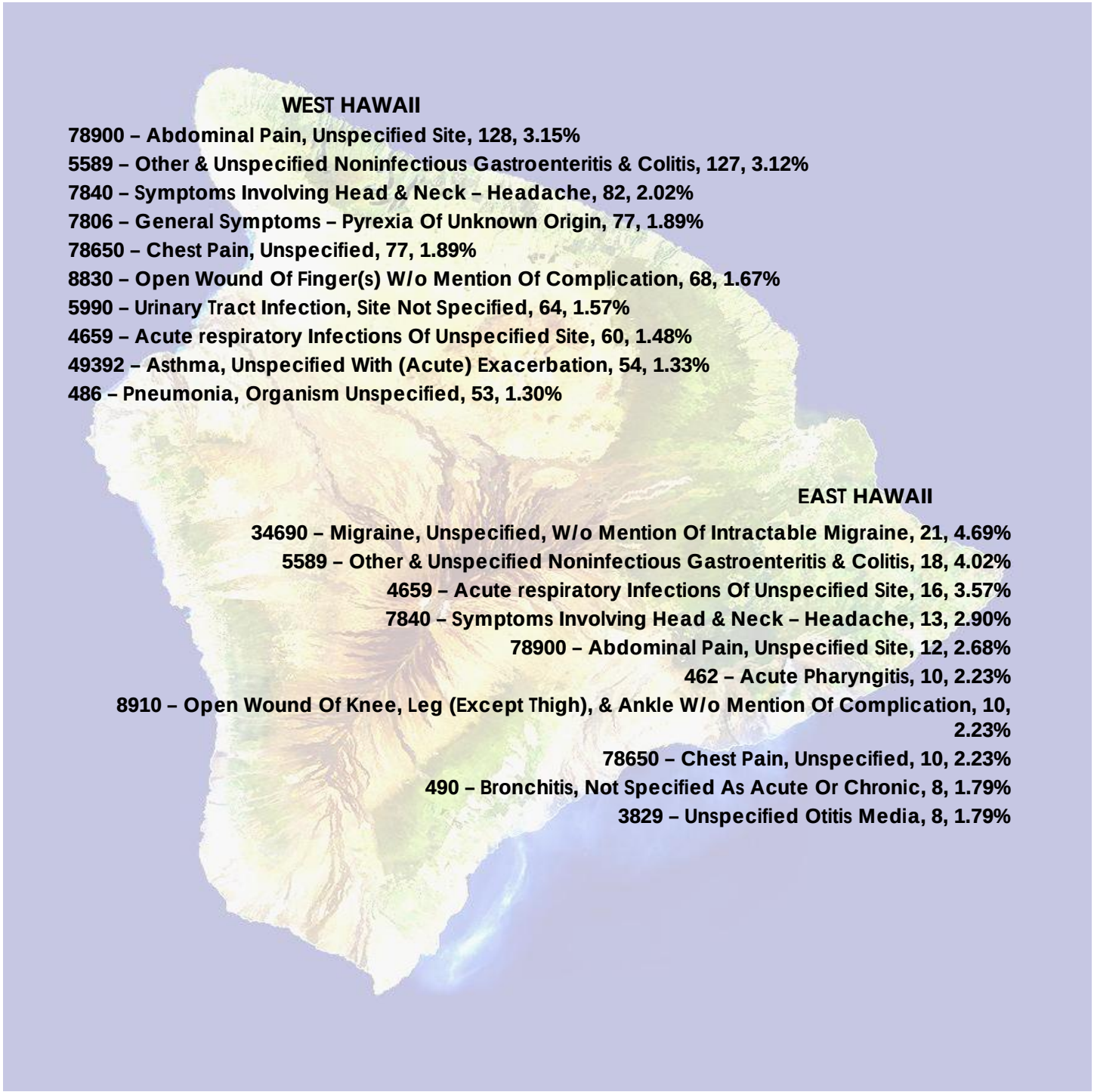
EAST KAUAI

78900 - Abdominal Pain, Unspecified Site, 534, 8.75%
78650 - Chest Pain, Unspecified, 307, 5.03%
7840 - Symptoms Involving Head & Neck – Headache, 225, 3.69%
7806 - General Symptoms – pyrexia of Unknown Origin, 193, 3.16%
78703 - Symptoms Involving Digestive system – Vomiting Alone, 177, 2.90%
7804 - General Symptoms – Dizziness & Giddiness, 134, 2.20%
920 - Contusion Of Face, Scalp, And Neck Except Eye(s), 126, 2.06%
7802 - General Symptoms – Syncope & Collapse, 97, 1.59%
4690 - Migraine, unspecified, W/o Mention Of Intractable Migraine, 97, 1.59%
7999 - Unspecified Viral Infections – Viral Infections Nos, 93, 1.52%

WEST KAUAI

7999 - Unspecified Viral Infections – Viral Infections Nos, 42, 0.69%
5990 - Urinary Tract Infection, 34, 0.56%
5589 - Other & Unspecified Noninfectious Gastroenteritis & Colitis, 33, 0.54%
78703 - Symptoms Involving Digestive System - Vomiting Alone, 27, 0.44%
7840 - Symptoms Involving Head & Neck – Headache, 23, 0.38%
34690 - Migraine, Unspecific, W/o Mention Of Intractable Migraine, 23, 0.38%
920 - Contusion Of Face, Scalp, & Neck Except Eye(s), 22, 0.36%
3829 - Unspecific Otitis Media, 22, 0.36%
8830 - Open Wound Of Finger(s) W/o Mention Of Complication, 22, 0.36%
49390 - Asthma, Unspecified, 22, 0.36%

TOP 10 DIAGNOSIS CODES FOR ER VISITS ON THE ISLAND OF HAWAII



WEST HAWAII

78900 – Abdominal Pain, Unspecified Site, 128, 3.15%
5589 – Other & Unspecified Noninfectious Gastroenteritis & Colitis, 127, 3.12%
7840 – Symptoms Involving Head & Neck – Headache, 82, 2.02%
7806 – General Symptoms – Pyrexia Of Unknown Origin, 77, 1.89%
78650 – Chest Pain, Unspecified, 77, 1.89%
8830 – Open Wound Of Finger(s) W/o Mention Of Complication, 68, 1.67%
5990 – Urinary Tract Infection, Site Not Specified, 64, 1.57%
4659 – Acute respiratory Infections Of Unspecified Site, 60, 1.48%
49392 – Asthma, Unspecified With (Acute) Exacerbation, 54, 1.33%
486 – Pneumonia, Organism Unspecified, 53, 1.30%

EAST HAWAII

34690 – Migraine, Unspecified, W/o Mention Of Intractable Migraine, 21, 4.69%
5589 – Other & Unspecified Noninfectious Gastroenteritis & Colitis, 18, 4.02%
4659 – Acute respiratory Infections Of Unspecified Site, 16, 3.57%
7840 – Symptoms Involving Head & Neck – Headache, 13, 2.90%
78900 – Abdominal Pain, Unspecified Site, 12, 2.68%
462 – Acute Pharyngitis, 10, 2.23%
8910 – Open Wound Of Knee, Leg (Except Thigh), & Ankle W/o Mention Of Complication, 10, 2.23%
78650 – Chest Pain, Unspecified, 10, 2.23%
490 – Bronchitis, Not Specified As Acute Or Chronic, 8, 1.79%
3829 – Unspecified Otitis Media, 8, 1.79%

Exhibit 3

HHSC 4 ACUTE FACILITIES TOP 10 APR DRG FOR CALENDAR YEAR 2005 USING # OF DISCHARGES FROM HHIC ACUTE DATABASE

Product Line	APR DRG	Maui	Hilo	Kona	KVMH	Total
HHSC 4 Acute Facility Top 10 DRG by # of Cases						
Neonatology	640 - Neonate Birthwt >2499g, Normal Newborn Or Neonate W Other Problem	1511	1001	454	118	3084
Obstetrics/Delivery	560 - Vaginal Delivery	1015	633	276	77	2001
Obstetrics/Delivery	540 - Cesarean Delivery	532	387	183	47	1149
Pulmonary	139 - Other Pneumonia	309	254	161	85	809
Cardiology	194 - Heart Failure	276	234	92	42	644
Infectious Disease	383 - Cellulitis & Other Bacterial Skin Infections	339	140	117	21	617
Cardiology	190 - Acute Myocardial Infarction	191	316	52	10	569
Cardiology	203 - Chest Pain	344	49	76	19	488
Cardiology	198 - Angina Pectoris & Coronary Atherosclerosis	199	118	115	18	450
Cardiology	201 - Cardiac Arrhythmia & Conduction Disorders	249	103	60	13	425
	HHSC 4 Acute Facility Combined Top 10 APR DRG	4965	3235	1586	450	10236
	TOTAL CASES	12921	7808	4043	980	25752
	% OF TOTAL	38.43%	41.43%	39.23%	45.92%	39.75%
Maui's Top 10 APR DRG						
Neonatology	640 - Neonate Birthwt >2499g, Normal Newborn Or Neonate W Other Problem	1511	1001	454	118	3084
Obstetrics/Delivery	560 - Vaginal Delivery	1015	633	276	77	2001
Obstetrics/Delivery	540 - Cesarean Delivery	532	387	183	47	1149
Cardiology	203 - Chest Pain	344	49	76	19	488
Infectious Disease	383 - Cellulitis & Other Bacterial Skin Infections	339	140	117	21	617
Pulmonary	139 - Other Pneumonia	309	254	161	85	809
Cardiology	194 - Heart Failure	276	234	92	42	644
Cardiology	201 - Cardiac Arrhythmia & Conduction Disorders	249	103	60	13	425
General Surgery	263 - Laparoscopic Cholecystectomy	207	122	71	10	410
Cardiology	198 - Angina Pectoris & Coronary Atherosclerosis	199	118	115	18	450
	Maui's Top 10 APR DRG	4981	3041	1605	450	10077
	TOTAL CASES	12921	7808	4043	980	25752
	% OF TOTAL	38.55%	38.95%	39.70%	45.92%	39.13%
Hilo's Top 10 APR DRG						
Neonatology	640 - Neonate Birthwt >2499g, Normal Newborn Or Neonate W Other Problem	1511	1001	454	118	3084
Obstetrics/Delivery	560 - Vaginal Delivery	1015	633	276	77	2001
Obstetrics/Delivery	540 - Cesarean Delivery	532	387	183	47	1149
Cardiology	190 - Acute Myocardial Infarction	191	316	52	10	569
Pulmonary	139 - Other Pneumonia	309	254	161	85	809
Cardiology	194 - Heart Failure	276	234	92	42	644
Infectious Disease	383 - Cellulitis & Other Bacterial Skin Infections	339	140	117	21	617
Psychiatry	751 - Major Depressive Disorders & Other/Unspecified Psychoses	103	133	95	1	332
General Surgery	263 - Laparoscopic Cholecystectomy	207	122	71	10	410
Cardiology	198 - Angina Pectoris & Coronary Atherosclerosis	199	118	115	18	450
	Hilo Top 10 APR DRG	4682	3338	1616	429	10065
	TOTAL CASES	12921	7808	4043	980	25752
	% OF TOTAL	36.24%	42.75%	39.97%	43.78%	39.08%

Kona's Top 10 APR DRG						
Neonatology	640 - Neonate Birthwt >2499g, Normal Newborn Or Neonate W Other Problem	1511	1001	454	118	3084
Obstetrics/Delivery	560 - Vaginal Delivery	1015	633	276	77	2001
Obstetrics/Delivery	540 - Cesarean Delivery	532	387	183	47	1149
Pulmonary	139 - Other Pneumonia	309	254	161	85	809
Infectious Disease	383 - Cellulitis & Other Bacterial Skin Infections	339	140	117	21	617
Cardiology	198 - Angina Pectoris & Coronary Atherosclerosis	199	118	115	18	450
Psychiatry	751 - Major Depressive Disorders & Other/Unspecified Psychoses	103	133	95	1	332
Cardiology	194 - Heart Failure	276	234	92	42	644
Cardiology	203 - Chest Pain	344	49	76	19	488
Psychiatry	775 - Alcohol Abuse & Dependence	134	29	76	1	240
	Kona's Top 10 APR DRG	4762	2978	1645	429	9814
	TOTAL CASES	12921	7808	4043	980	25752
	% OF TOTAL	36.85%	38.14%	40.69%	43.78%	38.11%
KVMH's Top 10 APR DRG						
Neonatology	640 - Neonate Birthwt >2499g, Normal Newborn Or Neonate W Other Problem	1511	1001	454	118	3084
Pulmonary	139 - Other Pneumonia	309	254	161	85	809
Obstetrics/Delivery	560 - Vaginal Delivery	1015	633	276	77	2001
Obstetrics/Delivery	540 - Cesarean Delivery	532	387	183	47	1149
Cardiology	194 - Heart Failure	276	234	92	42	644
Nephrology	463 - Kidney & Urinary Tract Infections	170	96	48	31	345
Pulmonary	140 - Chronic Obstructive Pulmonary Disease	121	83	51	25	280
Orthopedic Surgery	315 - Shoulder, Upper Arm & Forearm Procedures	59	18	7	22	106
Infectious Disease	383 - Cellulitis & Other Bacterial Skin Infections	339	140	117	21	617
Cardiology	204 - Syncope & Collapse	163	23	28	21	235
	KVMH Top 10 APR DRG	4495	2869	1417	489	9270
	TOTAL CASES	12921	7808	4043	980	25752
	% OF TOTAL	34.79%	36.74%	35.05%	49.90%	36.00%

Exhibit 4 – Study Methodology for the Cost of Uncompensated and Under Compensated Trauma Care for Fiscal Year 2005

Physician Call Costs

The cost of physician on-call coverage for Hawai`i hospitals were gathered in conjunction with the process of calculating the unreimbursed cost of providing trauma care in hospitals in Hawai`i. Therefore, only facilities who provide trauma services were included. Each facility was responsible for determining their own costs. As call costs incurred to provide physician coverage are not provided or paid for in the same way for all facilities, different methodologies were used by facilities to estimate the physician call cost depending on the type of service provided by the physicians and the contract terms. The following descriptions provide a brief overview of the different methods used to determine those costs:

1.) Actual costs were used for facilities who pay specifically and separately for on-call fees. These included payments to multiple specialties (hospitalists, internists, obstetrics, pediatrics, etc.) at contracted rates.

2.) For facilities with employed physicians, call coverage is an integral part of their total employment arrangement. The cost was determined by multiplying the number of hours of on-call coverage by a national average on-call pay rate for each specialty. The national average on-call pay rates were obtained from the "Physician On-call Pay Survey" conducted by Sullivan, Cotter and Associates, Inc., a human resources management consulting firm. The survey provides hourly call costs by specialty and for restricted (the physician is required to remain on the premises) and unrestricted (the physician is not required to remain on the premises). The lower of the two, unrestricted pay, was used for the calculations.

3.) A facility with an underutilized emergency department included the portion of the emergency room physician's salary that was related to the unproductive time since they were required to be on site despite only treating a limited number of patients.

4.) Facilities with on-call coverage contracts that include some additional duties determined the percentage of time spent mostly on-call versus the additional duties and applied that percentage to the contracted payment amounts.

Non-Physician Call Costs

To determine the non-physician call costs, the hospital employee payroll records were utilized. Hospital payroll systems contain codes to identify whether the hours were for regular time, on call, vacation, etc. Each facility pulled payroll information for all pay periods between July 1, 2004 and June 30, 2005. The data was sorted and any payroll expenses for on call and call back were identified. These lines were then reviewed for relevance to the emergency department. Items such as maintenance or home health services were removed from the data. The remaining data represented call costs for services required to be a level II trauma center by the American College of Surgeons such as imaging, laboratory, operating room, anesthesia, etc.